

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-24 (previously canceled)

Claim 25 (currently amended): An isolated nucleic acid comprising a ~~[nucleic acid sequence]~~ polynucleotide which encodes a domain of a ramoplanin nonribosomal peptide synthetase, wherein said ramoplanin nonribosomal peptide synthetase comprises ~~[an]~~ the amino acid sequence of ~~[SEQ ID NO: 13, SEQ ID NO: 14,]~~ SEQ ID NO: 15~~;~~ or SEQ ID NO: 18].

Claim 26 (currently amended): The isolated nucleic acid of claim 25, wherein said domain is a condensation domain ~~[-an adenylation domain, a thiolation domain or a thioesterase domain]~~.

Claims 27-30 (canceled)

Claim 31 (currently amended): The isolated nucleic acid of claim ~~[26]~~ 25, wherein said polynucleotide encodes a condensation domain ~~[comprises]~~ comprising an amino acid sequence selected from the group consisting of: ~~[amino acids 1-470 of SEQ ID NO: 13; amino acids 1-517 of SEQ ID NO: 14, amino acids 1106-1560 of SEQ ID NO: 14; amino acids 2159-2618 of SEQ ID NO: 14; amino acids 3237-3697 of SEQ ID NO: 14; amino acids 4241-4718 of SEQ ID NO: 14; amino acids 5307-5754 of SEQ ID NO: 14; amino acids 5838-6317 of SEQ ID NO: 14;]~~ amino acids 1-~~[470]~~ 486 of SEQ ID NO: 15; amino acids 1109-1567 of SEQ ID NO: 15; amino acids 2122-2602 of SEQ ID NO: 15; amino acids 3212-3671 of SEQ ID NO: 15; amino acids 4217-4698 of SEQ ID NO: 15; amino acids 5317-5776 of SEQ ID NO: 15; amino acids 6363-6839 of SEQ ID NO: 15 and amino acids 7458-7925 of SEQ ID NO: 15.

Claim 32 (currently amended): The isolated nucleic acid of claim [26] 25, wherein said polynucleotide encodes an adenylation domain [~~comprises~~] comprising an amino acid sequence selected from the group consisting of: [~~amino acids 471-959 of SEQ ID NO: 13; amino acids 518-990 of SEQ ID NO: 14; amino acids 1561-2052 of SEQ ID NO: 14; amino acids 2619-3122 of SEQ ID NO: 14; amino acids 3698-4160 of SEQ ID NO: 14; amino acids 4179-5192 of SEQ ID NO: 14; amino acids 6318-6804 of SEQ ID NO: 14;~~] amino acids 487-993 of SEQ ID NO: 15; amino acids 1568-2041 of SEQ ID NO: 15; amino acids 2603-3095 of SEQ ID NO: 15; amino acids 3672-4135 of SEQ ID NO: 15; amino acids 4699-5199 of SEQ ID NO: 15; amino acids 5777-6280 of SEQ ID NO: 15; amino acids 6840-7343 of SEQ ID NO: 15 and amino acids [~~7296~~]7926-8380 of SEQ ID NO: 15.

Claim 33 (currently amended): The isolated nucleic acid of claim [26] 25, wherein said polynucleotide encodes a thiolation domain [~~comprises~~] comprising an amino acid sequence selected from the group consisting of [~~amino acids 961-1030 of SEQ ID NO: 13; amino acids 991-1059 of SEQ ID NO: 14; amino acids 2054-2122 of SEQ ID NO: 14; amino acids 3123-3191 of SEQ ID NO: 14; amino acids 4161-4228 of SEQ ID NO: 14; amino acids 5193-5260 of SEQ ID NO: 14; amino acids 5755-5824 of SEQ ID NO: 14; amino acids 6805-6873 of SEQ ID NO: 14;~~] amino acids 994-1062 of SEQ ID NO: 15; amino acids 2042-2110 of SEQ ID NO: 15; amino acids 3097-3165 of SEQ ID NO: 15; amino acids 4136-4202 of SEQ ID NO: 15; amino acids 5200-5268 of SEQ ID NO: 15; amino acids 6281-6350 of SEQ ID NO: 15; amino acids 7344-7411 of SEQ ID NO: 15 and amino acids 8381-8449 of SEQ ID NO: 15.

Claim 34 (currently amended): The isolated nucleic acid of claim [26] 25, wherein said polynucleotide encodes a thioesterase domain [~~comprises an~~] comprising the amino acid sequence of amino acids 8450-8695 of SEQ ID NO. 15.

Claims 35-39 (canceled)

Claim 40 (currently amended): The isolated nucleic acid of claim [29] 25, wherein said nucleic acid comprises a coding sequence identical to or complementary to nucleotides 39713-65800 of SEQ ID NO: 1 or a sequence that encodes an amino acid sequence of SEQ ID NO: 15.

Claim 41 (canceled)

Claim 42 (currently amended): The isolated nucleic acid of claim [4] 25, wherein said nucleic acid is identical to or complementary to SEQ ID NO: 1.

Claim 43 (original): An expression vector comprising a nucleic acid of claim 25.

Claim 44 (original): A host cell transformed with an expression vector of claim 43.

Claim 45 (currently amended): A method of preparing [~~ramoplanin or an analog thereof~~] a nonribosomal peptide, comprising transforming a host cell with an expression vector of claim 43, culturing said host cell under conditions such that a [~~ramoplanin~~] nonribosomal peptide synthetase is produced and catalyzes the synthesis of said [~~ramoplanin or analog thereof~~] nonribosomal peptide.

Claim 46 (new): The isolated nucleic acid of claim 25, wherein said domain is an adenylation domain.

Claim 47 (new): The isolated nucleic acid of claim 25, wherein said domain is a thiolation domain.

Claim 48 (new): The isolated nucleic acid of claim 25, wherein said domain is a thioesterase domain.

Claim 49 (new): The isolated nucleic acid of claim 26, wherein said nucleic acid comprises a coding sequence identical to or complementary to a nucleic acid selected

from the group consisting of: nucleotides 39713-41171 of SEQ ID NO: 1; nucleotides 43037-44413 of SEQ ID NO:1; nucleotides 46076-47518 of SEQ ID NO:1; nucleotides 49346-50725 of SEQ ID NO:1; nucleotides 52361-53806 of SEQ ID NO:1; nucleotides 55661-57040 of SEQ ID NO:1; nucleotides 58799-60229 of SEQ ID NO:1 and nucleotides 62084-63487 of SEQ ID NO:1.

Claim 50. (new): The isolated nucleic acid of claim 46, wherein said nucleic acid comprises a coding sequence identical to or complementary to a nucleic acid selected from the group consisting of: nucleotides 41172-42691 of SEQ ID NO: 1; nucleotides 44414-45835 of SEQ ID NO:1; nucleotides 47519-48997 of SEQ ID NO:1; nucleotides 50726-52117 of SEQ ID NO:1; nucleotides 53807-55309 of SEQ ID NO:1; nucleotides 57041-58552 of SEQ ID NO:1; nucleotides 60230-61741 of SEQ ID NO:1 and nucleotides 63488-64852 of SEQ ID NO:1.

Claim 51 (new): The isolated nucleic acid of claim 47, wherein said nucleic acid comprises a coding sequence identical to or complementary to a nucleic acid selected from the group consisting of: nucleotides 42692-42898 of SEQ ID NO: 1; nucleotides 45836-46042 of SEQ ID NO:1; nucleotides 49001-49207 of SEQ ID NO:1; nucleotides 52118-52318 of SEQ ID NO:1; nucleotides 55310-55516 of SEQ ID NO:1; nucleotides 58552-58762 of SEQ ID NO:1; nucleotides 61742-61945 of SEQ ID NO:1 and nucleotides 64853-65059 of SEQ ID NO:1.

Claim 52 (new): The isolated nucleic acid of claim 48, wherein said nucleic acid comprises a coding sequence identical to or complementary to nucleotides 65060-65797 of SEQ ID NO:1.

Claim 53 (new): An isolated nucleic acid comprising a polynucleotide which encodes a module of a nonribosomal peptide synthetase comprising a domain of the ramoplanin nonribosomal peptide synthetase of SEQ ID NO: 15.

Claim 54 (new): The isolated nucleic acid of claim 53, wherein said polynucleotide encodes a module of a nonribosomal peptide synthetase comprising a condensation domain and a thiolation domain of the ramoplanin nonribosomal peptide synthetase of SEQ ID NO:15.

Claim 55 (new): The isolated nucleic acid of claim 53, wherein said polynucleotide encodes a module of a nonribosomal peptide synthetase comprising a condensation domain, an adenylation domain and a thiolation domain of the ramoplanin nonribosomal peptide synthetase of SEQ ID NO:15.

Claim 56 (new): An expression vector comprising a nucleic acid of claim 53.

Claim 57 (new): A host cell transformed with an expression vector of claim 56.

Claim 58 (new): A method of preparing a nonribosomal peptide, comprising transforming a host cell with an expression vector of claim 57, culturing said host cell under conditions such that a nonribosomal peptide synthetase is produced and catalyzes the synthesis of said nonribosomal peptide.

Claim 59 (new): The isolated nucleic acid of claim 25, comprised in any one of cosmid 008CK (IDAC 190901-1), cosmid 008CO (IDAC 190901-2) or cosmid 008CH (IDAC 190901-3).